MISSOURI SCHOOLS MAKE FINE GAINS

ONLY ONE COUNTY IN STATE WITHOUT AN APPROVED HIGH SCHOOL.

EVANS GOES OUT JANUARY 11

Schools Have Increased From 225 in 1911 to 402 at Present Time—Incoming Official Will Have Big Task to Equal Record.

Jefferson City.

Warren county is the only one in the state which has not an approved high school, said Wm. P. Evans, state superintendent of public schools, while reviewing the development of the public schools of Missouri during the period of his incumbency. Evans goes out of office on Jan. 11 and Howard A. Gass will succeed him.

On Jan. 1, 1911, Evans said there were but 225 approved high schools in Missouri, while at the present time there are 402.

Discussing the growth of high schools in Missouri as indicative of the development of the public schools, Evans said:

"In no department of the Missouri educational system has the growth, which has been characteristic of the last few years, has been so marked as in the development of high chools. On Jan. 1, 1911, there were 225 approved high schools in the state. Of these 125 were first class or four-year high schools, 39 were second class or three-year high schools and 62 were third or two-year high schools. At the present time there are 402 approved high schools in the state. Of these 178 are first class, 68 are second class and 156 are third class. This shows an increase of 175 in the number of approved high schools, or an increase of 78 per cent."

Treasurer's Report.

The state of Missouri closed the old year with nearly $5,000,000 in her state treasury, an unusually large balance at the close of a biennial period.

From now until the close of the session of the general assembly the balance will continue to grow rapidly, as no more money can be paid out until the appropriations made by that body are available. Returns from county collectors this month will bring several million dollars into the treasury.

State Treasurer E. P. Deal filed with Gov. Major his monthly statement, showing the condition and transactions of the treasury for December, as follows:

Balance on hand Nov. 30, 1914, $4,450,838.11; receipts during November, $1,319,497.58; disbursements during December, $828,773.96; balance on hand Dec. 31, $4,942,011.73.

Earnings of the Missouri penitentiary for the month were $44,657.92; disbursements, $27,535.49, leaving a balance of $30,166.31.

There is in the capitol building fund a balance of $2,195,400.20, and in the capitol tax fund, out of which the interest on the capitol bonds and the sinking fund for their redemption is taken, a balance of $363,314.59.

In the general good roads fund there is a balance of $194,614.32 arising from the following sources:

Registration of automobiles, $63,385.56; sale of option stamps, $13,688.61; corporation registration tax, $54,810.38, and from the general fund, $63,729.87.

The total receipts into the treasury for the biennial period that closed Dec. 31 were $12,698,163.20 and the total disbursements for the period were $12,071,711.99. The biennial period started with a balance on hand of $4,020,560.52.

Receipts from the inspection of beer by the state for the 1911-1912 period were $962,159.33 and for the 1913-1914 period aggregated $987,869.63.

Interest in Bonds.

Numerous requests coming to various state departments from bankers and other investment companies for lists of bonds to be issued in the near future and placed upon the market by the various drainage, levee, school and other districts being organized throughout Missouri are construed as an evidence that business conditions are about settled after being demoralized by the European war, and that once more financial institutions are eager to invest.

No "Graft" for News Vendors.

Secretary Roach has announced that no charges will be entertained against clerks charged with selling information to publishers. The information is public property and if publishers want it they can either send for it or pay some person in a position to send it for the trouble. There can be no graft connected with such an arrangement.

Counterfeiting Plant.

Officers at the penitentiary unearthed a counterfeiting plant in the cell of William Brandon. Four molds and dies for making spurious half dollars were found. About 30 coins were confiscated.

Alleged Slayer Caught.

Gov. Major issued a requisition on the governor of Oklahoma for the return of Harry Ball, charged with having caused the death of Mrs. Elva Anderson in Clinton county by beating, bruising and biting her.

Barrington Asks Freedom.

It is stated that a direct appeal will be made to Gov. Major within the next few days to grant a parole to W. Seymour (Lord Barrington), who is serving a life sentence in the penitentiary for the murder of James J. McCann in St. Louis county in 1904.

Charity Day Collections.

Money and checks in letters up to date will bring the Missouri charity day collections well up over the $10,000 mark. The committee is now discussing plans for relief.

"Wet" and "Dry" Status.

How "wet and dry" Missouri was on July 1, 1914, can be gleaned from a bulletin dealing with this question given publicity by the bureau of labor statistics through Commissioner J. T. Fitzpatrick, which states that out of 12,138 special tax payers here to Uncle Sam 8,843 are retail liquor dealers. In this respect Missouri ranks seventh, having more such dealers than Illinois, which includes Chicago, but less than California, New Jersey, New York, Ohio, Pennsylvania and Wisconsin.

The "wettest" portion of Missouri is the eastern half, which is known as the First internal revenue district, containing such oases as St. Louis, Hannibal, Cape Girardeau, Hermann, Washington, Caruthersville, New Madrid, St. Charles and two or three other cities, there being 5,646 saloons, retail liquor dealers and "lid" clubs in this half. The western district, which is the Sixth district, has 3,197 saloons, dramshops and buffets, to be found in Kansas City, St. Joseph, Joplin, Sedalia, Springfield, Jefferson City and three or four other cities. Included in these figures are all other organizations such as the Moose, Elks, Eagles, Owls, the fashionable clubs of the larger cities, also "lid"-lifting social organizations which have bars and dispense liquors. Just how many of these organizations were put out of business by the supreme court decision of a month ago requiring all clubs with buffets to take out a state dramshop license will not be known until next July.

According to the information, there are 46 breweries running in full blast, which in the fiscal year of 1913-14 turned out 4,152,160 barrels of beer, worth approximately $29,000,000. While long on breweries, Missouri is short on distilleries, there being only 31 registered plants and 20 in actual operation last July, 24 of these distilling from grain and seven from fruit.

On July 1, 1913, there were 34 registered distillers in the state, indicating a decrease of three in the course of a year. There was also a falling off in the number of retail liquor dealers, there being 8,851 in Missouri in the summer of 1913, which was 118 more than in the summer of 1914.

These liquor figures do not include any "moonshine," "soft and easy," "blind tigers" or "bootlegging" resorts where beer and whisky are sold by the gallon, quart, pint or drink.

Many Dead Laws.

Senator John F. Morton of Richmond, a member of the special commission selected by Gov. Major some months ago to "weed out" obsolete, conflicting, unconstitutional and otherwise defunct laws from the Missouri statutes, is here awaiting the coming of Robert Lamar of Houston and James A. Alford of New London, to hold a meeting to prepare a report on the work.

Senator Morton, to whom was assigned volume No. 3 of the statutes, finds that in this volume there are 12 general laws that have been declared unconstitutional in years gone by and should be eliminated.

There are also a number of conflicting sections and incongruities, all of which will be cured by special bills prepared under the report of the commission.

A hundred or more bills may be necessary to carry out the "pruning" program that will be suggested by the commission.

Inheritance Taxes.

State Auditor Gordon during the last four years has collected $830,029.78 more collateral inheritance tax than W. W. Wilder, his predecessor, did during his four years in the office.

The collateral inheritance tax collections made by Gordon for four years, ending Dec. 31, 1914, are:

1911	$ 480,783.06
1912	479,517.35
1913	412,815.49
1914	411,160.49
Total	$1,784,276.84

Roach's Report.

The receipts of the office of the secretary of state under the administration of Cornelius Roach in 1914 were nearly $200,000 in excess of the most prosperous year in the history of the department prior to Mr. Roach's incumbency.

The 1914 receipts were $435,587.62. The receipts during the last four years totaled $1,330,997.09. The last four years of his predecessor's term showed total receipts of $751,118.49, or an average of $187,779.62 a year. The average during Mr. Roach's term is $314,404.62.

Stone for High Honor.

The Christmas season political rumor is that William Jennings Bryan is to retire soon from the cabinet and is to be succeeded as secretary of state by William Joel Stone.

Major to Make Address.

The board of directors of the Missouri Grain Dealers' association met here to arrange the program for the annual convention in St. Louis, Jan. 18 and 19. Gov. Major will make an address.

Miss Droste Seeks Senate Job.

Miss Theresa Droste of Jefferson City, whose name was given among the candidates for elective positions in the house and senate of the Forty-eighth general assembly as a candidate for the position of folder of the house, is a candidate for that position in the senate.

Houston to Speak at U. of M.

D. F. Houston, secretary of agriculture, will make an address Jan. 13 at the University of Missouri. It will be farmers' week.

Burglar Paroled.

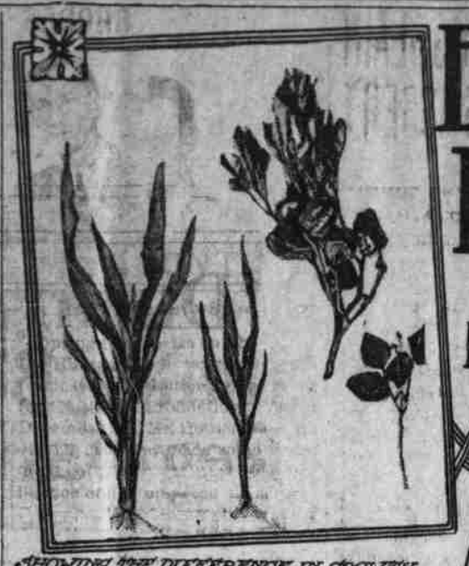
Gov. Major paroled Jack Bingham, sentenced for two years for burglary. Bingham got 60 days off his time for meritorious work on the public highways on "good roads" day last August.

Delays Naming Blair's Successor.

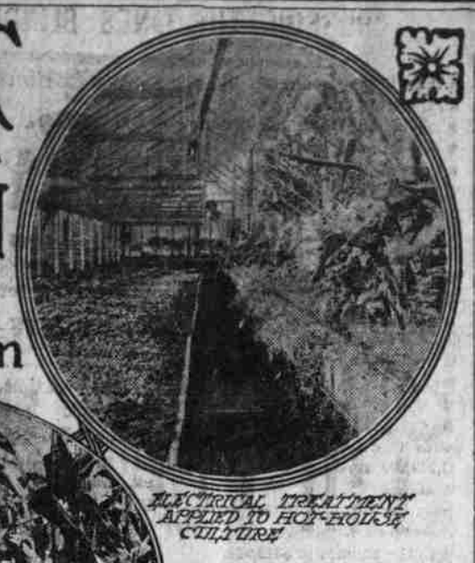
It is understood that the supreme court will not take up the selection of a member of the supreme court commission until after Commissioner James T. Blair has been inducted into office as a member of the bench.

ELECTRIC FARMING

By Robert H. Moulton



SHOWING THE DIFFERENCE IN GROWTH BETWEEN PLANTS ON ELECTRIFIED AND UNELECTRIFIED SOIL



"ELECTRICAL TREATMENT" APPLIED TO HOT-HOUSE CULTURE

CORN ON THE ELECTRICAL FARM SEVERAL WEEKS AHEAD OF THAT ON OTHER FARMS

NOW that scientists have discovered that high frequency electrical currents are powerful stimulants both of plant and animal life, the farm hand of the future may have to be a duly qualified electrical engineer before he can get a job.

It will not be enough for him to know how to manipulate the motors and transmission gear by which the farm machinery will be run. He will have to be up on the chemistry of electricity. He will have not only to know the use of violet rays in purifying the drinking water, but will also have to know whether ground wires are better for beets, ruby lights for radishes, mercury vapor for tobacco and electric sprinkling for something else.

He will have to be something of a plant neurologist, too. When the corn in the south forty is getting "nerves," or when the oats in the new ground is becoming too somnolent, he will have to make correct diagnoses and prescribe the proper treatment.

Electrification for plant growth has arrived. And when the canny American farmer learns that he can double or even treble the output of his fields by the use of electricity, somebody will have to find a way for him to use electricity and make a good profit out of his crops.

A few weeks ago there was a convention of practical electricians in Philadelphia. Among the addresses one virtually escaped the attention of the corps of reporters. Yet of all the addresses, none was more pregnant of great possibilities.

It was really part of the report of the convention's committee of progress and was read by the committee chairman, T. C. Martin of New York, an authority on things electrical. He gave facts and figures to show that plants electrically treated grew much more rapidly than those growing under normal conditions. Why this was so, he did not assume to say. He simply gave the results of experiments.

The work was started on Moraine farm in the fertile Miami river valley, four miles south of Dayton, Ohio. Dr. Herbert G. Dorsey, an expert, had charge of the experiments, which were fostered by the efforts of F. M. Tait, a former president of the National Electric Light association.

In preliminary tests, according to Martin's report, small plots were marked off for exposure to different kinds of electrification. To insure that the soil of one plot was not better than that of another, top earth was collected, mixed and sifted and then was laid to the uniform depth of seven inches over the entire area.

In the soil of plot No. 1 was buried a wire screen. Over the plot was a network of wire, stretched about fifteen inches from the ground. Connecting the network above the ground and the screen below were several wire antennae. The screen was connected to one terminal of a Tesla coil and the network to the other. A transformer stepped a 110-volt alternating current up to 5,000 volts, charging a condenser of tinfoil and glass plates, which discharged through a primary of the coil. About one hundred and thirty watts were operated for an hour each morning and evening.

Plot No. 2 was illuminated by a 100-watt tungsten lamp with a ruby bulb. The light was turned on for three hours daily, beginning at sundown. Plot No. 3 was illuminated the same way, except that a mercury vapor lamp was used. No. 4 had no artificial stimulation of any kind, being intended as a comparison between electrically excited plant growth and that of natural conditions.

THE ELECTRICAL FARM

SHOWING FLOURISHING CONDITION OF THE CROPS ON THE ELECTRIC FARM

In plot No. 5 was buried a wire network connected to the terminal of a 110-volt direct current. The positive terminal was attached to a small sprinkling can with a carbon electrode in its center. The can being filled, the water was subjected to electrolysis for several minutes. The plot was then sprinkled from the can, the theory being that the current might flow from the can, through the streams of water to the soil.

Plots Nos. 6 and 7 were subdivided into four individual boxes, two feet square, separated by porcelain insulators and arranged with carbon electrodes at each end. To these electrodes were applied both direct and alternating currents.

After radish and lettuce seed had been planted and germination had begun, the various methods of electrification were tried with extreme care. The result of the experiments showed that the plants in plot No. 1 grew in every instance far more rapidly than those in the other beds and more than double the normal growth as shown in the unelectrified bed.

From this the experimenters became convinced that electrification of the ground by high-frequency currents stimulated plant life to an extent that warranted a more complete investigation. So they selected two acres of flat, rich ground.

First a network of sprinkling pipes was built 15 feet above ground. The pipes ran east and west a distance of 200 feet and were spaced at 50-foot intervals. In the northeast corner of the tract seven copper wires were stretched north and south, each being 200 feet long and an interval of 15 feet separating them. The wires were elevated sufficiently for the soil to be plowed with horses. The ends of the wires were attached to insulators on top of gas pipes set in concrete.

At the eastern edge of the house the experimenters built a small transformer house and installed machinery which would yield 10,000 volts. A choke coil and a Tesla coil were used. The whole thing was connected up so that by means of antennae current from the wire network was sent to the network of sprinkling pipes, which, of course, furnished proper connection with the ground.

By the latter part of last July the system was in readiness and the currents were tested. At that time a pressure of 50,000 volts was obtained and the frequency of the oscillatory currents was estimated to be about thirty thousand cycles a second. Birds alighting on the wires were stunned and thrown the ground, but none was killed.

The ground was planted to radishes, lettuce, beets, cabbages, cucumbers, turnips, muskmelons, watermelons, tomatoes, parsnips, beans, peas, corn and tobacco. All were planted in rows running east and west, so that one-half of each row was electrified and the other half was not.

As a result it was found that practically all the plants in the electrified area grew much more rapidly than those out of it. In almost every case the electrified vegetables were ripe two weeks earlier than those outside the zone.

The electrified end of the tobacco crop was cut and it was found that each plant weighed 1,687 grams. It was two weeks before the untreated tobacco could be cut and then it weighed only 1,632 grams to the plant. Taking into consideration that the most rapid growth of the tobacco plant is in its last two weeks before ripening, the experimenters estimated that the actual increase in weight of the plants in the electrified zone was 20 per cent greater than that in the unelectrified zone. If this could be followed out on a grand scale, it is apparent that the effect of electrification on the annual tobacco output of the nation in a single season would be tremendous.

In his formal report to the association, Martin said that many questions had yet to be answered before the use of electricity for the general stimulation of plant life could be considered economically possible. He declared, however, that many of these questions are being worked out in greenhouses over the country.

Just as these American experimenters proved the importance of electrification to plant life, a group of English experimenters proved its importance to animal life. They took two large brooders, filled with newly hatched chickens of the same breeds. One of them was subjected to the influence of high-frequency currents and the other was not. Those in the former were found to grow much more rapidly than those in the other.

Following is a tabulation of the results of electrical stimulation of vegetables. It will be observed that in every particular the plants in the first plot, where the high-frequency current and Tesla coil were used, excelled those in plot No. 4, where natural conditions prevailed:

Radishes (ten plants selected at random):	Plot 1—Tesla Coil	Plot 2—Ruby Light	Plot 3—Mercury Vapor	Plot 4—Normal	Plot 5—Electric Sprinkling
Total plant weight, grams	265.70	137.80	109.50	180.00	78.50
Edible portion, grams	123.50	57.40	40.90	79.40	31.00
Edible portion, per cent	51.15	41.65	37.34	44.11	39.49
Tops and leaves, grams	120.50	75.70	65.90	95.00	41.50
Tops and leaves, per cent	43.35	54.92	60.18	52.77	55.66
Roots, grams	9.30	4.70	2.20	5.60	6.00
Roots, per cent	3.50	3.43	2.43	3.13	4.85
Lettuce (ten plants selected (at random)	67.00	52.69	56.50	46.10	31.30
Edible portion, grams	60.70	47.30	50.30	41.80	28.20
Roots, grams	6.30	5.30	6.30	4.30	3.10
Roots, per cent	9.41	10.08	11.15	9.33	7.99
Edible portion, per cent	90.59	89.92	88.85	90.67	92.10

THEIR DESCENT.

Hampton—Dinwiddow told me his family is a very old one. They were one of the first to come across.

Rhodes—The grocer told me yesterday that now they are the last to come across.—Judge.

SUITS HERSELF.

"My wife is always asking me what I would like to eat."

"That's kind of her."

"Oh, I don't know. When I tell her she says, 'The idea!' and orders something else."

CAMERA MEN IN DANGER

Amateur photographers at the seaside or even in London and other big cities must be more careful than ever how they take snapshots during wartime, for a thoughtless use of their cameras may easily cause them to find themselves in prison for a few days, to say the least, Pearson's Weekly remarks.

In the early days of the war, for instance, a perfectly innocent Hull ship chandler, on a holiday in London, with his wife, was arrested by the police for taking photographs of Battersea bridge. After being detained the best part of the day, during which inquiries were made, the authorities were satisfied that he was merely a harmless snapshotter, but nevertheless they warned him to keep his camera out of use until the war is over!

There are probably many thousands of amateur photographers who, wishing to snap scenes in the neighborhood of barracks, or other military or naval places, find themselves arrested as if they were spies. If they must take photographs in these war days let them resort to the woods and country lanes, as far from military scenes as they can get.

At the outset of the war the military authorities issued an order that no aeroplanes or airships must be photographed at a distance of less than forty yards, or of an air station at all, without the permission of the authorities.

Germany has always been the most dangerous country for the amateur photographer, and, more than one tourist has found himself roughly handled by the German police for innocently taking photographs. A special bill was passed a few years ago threatening tourists with a fine of £50 or two months' imprisonment who took photographs without permission.

The French officials in the towns on the Franco-German frontier have always objected to anyone taking snapshots, and, indeed, many a tourist has had his camera temporarily confiscated, to find afterward that his plates have all been rendered useless.

Italy not only bars people taking photographs near fortifications, but forbids the use of a camera in most of the picture galleries and museums.

PITTSBURGH'S YOUNG DAYS

December 3, 1818, Is a Date That Is a Factor in History of Famous City.

On December 3, 1818, and for several days preceding and succeeding, Pittsburgh was peculiarly agitated in regard to transportation by river and turnpike. This might almost have been written that "our rivers are so low that navigation is very difficult, and there is probably a million worth of merchandise lying along our shores." Great pressure had been brought to bear in favor of turnpikes which would better Baltimore, Cumberland and Wheeling rather than Pennsylvania towns, and Pittsburgh was made a target for antagonism which had southern feeling for something of its inspiration, one of the bases of it being the long-standing dispute in regard to the boundary between Virginia and Pennsylvania which at one time almost led to a miniature war, with Pittsburgh for its northern focal point. Even the administration at Washington was brought into the transportation matter, and mails were sent from Baltimore, Washington, Alexandria, Hagerstown and Cumberland by the Wheeling route, and "actually arrived at Pittsburgh by the western carrier." In December, 1818, it was boasted in the little Wheeling prints: "Poor Pittsburgh, your day is over; the scepter of influence and wealth is to travel to us; the Cumberland road has done the business," and chapters more to similar effect; all of which is as a matter of course immensely amusing in contemplating these anniversaries, discussion piling on discussion of a thousand matters of this kind.

On General Principles.

"I'm afraid I overdid my efforts to be popular," said the member of congress.

"How?"

"I voted in favor of every kind of appropriation and against every kind of tax that anybody proposed."

Comparative Liberty.

"Do you believe the poet's saying that 'Stone walls do not a prison make, nor iron bars a cage'?" asked Mr. Twobble.

"I don't know," said Mr. Meekson, thoughtfully, "but I dare say that stone walls and prison bars seem rather substantial things to a man who has been hedged about for 20 years by the glances of a watchful wife."

A New Course.

In a Philadelphia family recently the engagement of a daughter was announced. A friend calling was met at the door by the colored maid, who announced:

"No'm; Miss Alice ain't at home dis aft'noon—she's gone down to de class."

"What class?" inquired the visitor.

"You know, Miss Alice is gwine to be ma'ied in de fall," explained the maid, "an' she's takin' a cou'se in domestic silence."—Life.

The Finishing Touch.

The young man hesitated to believe the statement of her little brother that the young lady was not at home. He repeated the question, at the same time displaying a quarter. The boy eyed it longingly and again replied in the negative.

"But didn't she leave a message for me?" asked the disappointed swain.

"Yes," said the lad—and nothing more.

As one who sees a great light, the young man tossed him the coin. "Now," he said, "out with the message."

"She said she's not gonna see you any more and you're not to give me any money."—Philadelphia Ledger.

Just the Boy He Wanted.

The aim of golfers is, of course, to go round the course with as few strokes as possible, and the man with the least strokes wins the game. A player realized this once, and decided to engage a caddy who would help him.

"Caddie," he said to the boy who came up to him, "can you count?"

"Yes, sir," said the boy.

"Can you add up?"

"Yes, sir."

"Well, what's five and seven and four?"

"Twelve, sir."

"Come along," said the golfer, "you'll do." And he engaged the boy on the spot.